

January 29, 2015

**HORSESHOE LAKE NORTH
ANNUAL MEETING & LAKE MANAGEMENT PLAN**

Annual Meeting – 2015

- Agenda

Lake Management Plan

- General Provisions & Scope of Services
- Community-Based Activities & Events
- Current Fiscal Year: Planned Treatments, Funding & Recommendations
- Next Fiscal Year: Projected Treatments & Funding
- Exhibits – Agenda & Notes Prior Year, Budget & Financial Summary, Historic Reports/Data

HORSESHOE LAKE NORTH

ANNUAL MEETING

Date, Time & Location	:	January 29, 2015, 1:00 p.m., 200 W. County Home Rd – LMP office
Community Liaisons	:	Kevin Brotz, Leza Harrison, David Kuketz, and Patty Searcy
Liaisons Present	:	Leza Harrison, David Kuketz, and Patty Searcy
Seminole County	:	Sarah Benoit-Santiago, Thomas Calhoun, Kathy Moore, and Carol Watral
Guests	:	

Topics carried forward from prior fiscal year (FY13/14) activity

- Scheduled aquatic plant control treatments are as authorized by County staff after conducting bioassessment.
- Hydrilla (one sprig) was observed along the northeast shoreline on September 2, 2014.
- Hydrilla was added to the Florida Fish and Wildlife Conservation Commission permit.
- North Shoreline Restoration Event was held August 16, 2014. Sixty-four volunteers helped plant 3,480 free native plants at six shoreline sites.
- Newly planted areas were marked by GPS to create additional no herbicide treatment zones with a map provided to the contractor.
- Residents have been reminded to hand-pull invasives in no treatment zones.
- Importance of maintaining level of service to control invasives, including water hyacinth, continues to be conveyed to the Liaisons.
- Property owners should be encouraged to communicate comments/concerns through the liaison group, who will provide consolidated request/comments to the MSBU Project Manager (Carol Watral).

General Topics & Updates

- Roles and responsibilities
- LAKEWATCH sampling
- Hydrilla presence
- Status of planted restoration sites and future planting events (March 2015)
- Continue pricing of state contract established with herbicide service provider
- Plans for current fiscal year
- Projections for next fiscal year
- General recommendations for community consideration

Topics Requested by Liaisons

- Water sampling: (1) months collected; (2) notice of sampling; (3) Lakewatch vs. County comparison
- Hydrilla locations and method of identifying locations
- LVI process: (1) background information; (2) how the data is collected; (3) how it is analyzed
- Components of budgeted routine services and “reserve” target

Meeting Notes:

- March 28, 2015 planting event was discussed:
 - Pickerelweed, thalia, (and possibly sawgrass) were discussed as good alternatives in regards to wave action uprooting plants
 - Liaisons reported bulrush and canna have not done well
 - LMP will check on appropriate plants for wave action areas and review with liaisons

- Liaisons scheduled February 10 as a community meeting and asked if LMP will attend; LMP will check with Dean Barber for availability
 - LMP reminded that planting events target disturbed and eroded areas, but plants in the areas targeted may be eliminated by water depths/wave action
- Liaisons reported “conservation” areas are being cleared on the Oviedo lakefront properties; LMP will follow up with the liaisons with contact information to whom they can report the activities
- Liaison questioned the use of “Sunwet”; LMP explained it assists the treatment herbicide in sticking to the plant
- LMP reported pulling hydrilla from the lake (south of the north end of the canal) twice but there is not enough hydrilla to warrant a triploid grass carp fish stocking. Carp are also not advised due to low levels of submersed aquatic vegetation in the lake
- LMP announced a SAV mapping system. Ongoing maps will be made to provide for future comparisons on annual to biannual basis.
- LMP will provide liaisons with Marianne Pluchino’s contact information, Water Quality Program’s Senior Environmental Scientist, to discuss sampling scheduled
- LMP offered to drop off plants to properties to be planted outside of restoration events
- We have a new FWC regional biologist: Kris Campbell, at 6830 Shadowridge Dr., Suite 201, Orlando, FL 32812, 407-858-6170
- Progress of the County fertilizer ordinance was discussed

HORSESHOE LAKE NORTH LAKE MANAGEMENT PLAN

GENERAL PROVISIONS

Scope of Public Aquatic Weed/Plant Control [AWC] Services

The scope of public aquatic weed control [AWC] services funded by non-ad-valorem assessment includes those services associated with managing aquatic plant communities as deemed beneficial and/or critical to restoring, developing and/or maintaining conditions that enhance the water quality and over-all health of the waterbody; with emphasis on providing public services for public purposes which by definition of public are limited to the waterbody and respective shoreline when/where noxious and/or invasive exotic vegetation could/would threaten or impede the waterbody.

Governing documents

- Seminole County Ordinance 2012-15
- Interlocal Agreement [IA] with City of Oviedo
- FWC Permit

Methods for Aquatic Weed Control as authorized via County Ordinance/Resolution

- Chemical (herbicides)

Targeted Invasive/Exotic Aquatic Vegetation

- Water hyacinth, torpedo grass, alligator weed, wild taro, salvinia, Cuban burhead sedge, and coinwort. Also hydrilla has been added to the permit

Frequency of AWC Treatment

AWC services are performed at the direction of the Seminole County LMP as per the Horseshoe Lake North Management Plan reviewed at the annual planning session with the expectation that the Seminole County LMP may alter anticipated treatments on an as merited basis per changing/evolving conditions noted during site inspections.

Herbicide Treatments - Service Provider

- As determined by Seminole County staff

Funding

Assessment rate may vary annually based on financial demands of changing conditions, such as cost of herbicide treatments, frequency of treatments, and other factors impacting assessment calculations. The governing ordinance does not include assessment restrictions specific to annual adjustment amounts and/or assessment cap.

Lake Liaisons

Designated property owners (or their designated representatives) provide community representation at annual planning sessions with the County and serve voluntarily as the key point of contact for community inquiries and concerns. The liaisons for Horseshoe Lake North are: Kevin Brotz (kevin@getbitoutdoors.com); Leza Harrison (skileza@aol.com); David Kuketz (u2consulting@hotmail.com); and Patty Searcy (steveandpatty1@att.net).

HORSESHOE LAKE NORTH

COMMUNITY-BASED ACTIVITIES & EVENTS

LMP recommends/encourages homeowners to coordinate a resident-based volunteer event involving native plantings along the shoreline of Horseshoe Lake North. The intention of such an event is to plant beneficial native aquatic plants to key areas in need along the bank. It is especially important that as the aquatic invasive plants (such as torpedo grass) are being treated, native aquatic plants should be established within these areas. The presence of the recommended native plant species along the shoreline provides habitat for fish and wildlife, helps impede invasive exotics from re-establishing, and reduces erosion of the shoreline. All of these best management practices are essential to providing the conditions that promote an environmentally stable habitat to be enjoyed by generations to come. The key to success is dependent on strong participation of the Horseshoe Lake North community.

Continued recommendations for community initiatives are as follows:

- 1) Continue to work together with other lakefront owners. Have *at least* one annual lake association meeting, invite guest speakers (such as county or state biologists) and discuss lake specific issues, especially nutrients/lake management recommendations. LMP staff would be glad to present our bioassessments and surveys.
- 2) Continue to establish a beneficial native shoreline for Horseshoe Lake North, especially in locations that are devoid of emergent aquatic plants. LMP recommends planting in new locations that are shallower and have more sunlight.
- 3) Natives will grow and contain non-natives (and vice-versa) that become difficult to treat. Unless hand pulled, a directed herbicide treatment targeting the non-natives (which will expand otherwise) will impact the adjacent natives. Everyone must become stewards of the lake, in that they should assist and facilitate the removal of non-natives in close proximity to the natives and replant the area with beneficial natives for greater overall success.
- 4) Utilize the valuable educational outreach programs that are available, i.e. Shoreline Restoration Workshops, Florida Yards and Neighborhoods (FYN) interactive presentations, and Lake Management Video mail-outs. Implement a media campaign within the community to reduce personal pollution by: decreasing fertilizer usage, using only phosphorous free and slow-release nitrogen fertilizers, keeping a functional shoreline with beneficial native aquatic plants, and keeping grass clippings out of your lake and the storm drains that lead to the lake. All of these activities aid in protecting your lake! Contact Seminole County Lake Management Program (407) 665-2439 for more information regarding the free educational programs available.
- 5) LAKEWATCH volunteers provide valuable water quality data for your lake. Obtain monthly samples and establish a back-up volunteer for consistent data collection.
- 6) Help spread the word! Obtain email addresses from neighbors not currently on the distribution list. Valuable information is contained within these assessments.

Important to Note: When herbicides are applied along the shoreline to invasive plants (such as torpedo grass), overspray onto adjacent desirable vegetation may occur. In order to avoid damage to desired vegetation, manual (by hand) removal (by property owner) of the undesirable species from among the desirable species is advised. If the invasive plants are removed by this method, spraying the area can be reduced, thereby offering greater protection to the desirable species. The physical removal of dead/decaying aquatic plant material will reduce the volume of decomposing vegetation on the lake bottom (muck layer) and will increase the success of the efforts to limit the re-growth of the invasive plants.

HORSESHOE LAKE NORTH

COUNTY SERVICES – Lake Management & Supplemental Programs

While the MSBU assessment includes a nominal charge for administering the MSBU, the amount charged does not cover all the expenses incurred by the County on behalf of the waterfront property owners. Horseshoe Lake North is monitored by LMP to assess the aquatic plant growth. LMP provides continued evaluation of the aquatic plant species, such as hyacinth, and provides community updates via regular email reports on the status of all treatments and waterbody assessments. In addition, LMP offers free aquatic plant material (as available) for sponsored restoration events and local community volunteers coordinated through the county's Seminole Education and Restoration Volunteer (SERV) Program. Many of the services provided by the LMP are made available to support community riparian stewardship without additional charges being assigned to the MSBU budget.

Current Fiscal Year – Planned Treatment & Funding

Primary Aquatic Plant Management Expectations

Seminole County [MSBU/LMP] is tasked with managing the invasive-exotic species within the lake, and does so per accepted best lake management practices supported by lake management professionals. LMP/MSBU Programs affirmed that aquatic weed control services will continue to be rendered per these standards. Invasive growth in Horseshoe Lake North has likelihood to continue; however, the timing and extent of invasive re-growth is affected by multiple natural and environmental factors that cannot be controlled or predicted with certainty.

Funding Expectations

Refer to current fiscal year budget data provided in Exhibit B.

Next Fiscal Year – Projected Treatment & Funding

Primary Aquatic Plant Management Expectations

- 1) Continued aquatic herbicide maintenance for invasive vegetation per FWC permit (as needed).
- 2) Continued monitoring of invasive species.
- 3) Increase contingency reserve funds for extended herbicide management and/or other issues that may develop and require immediate treatment.

Funding Expectations

Refer to next fiscal year budget data provided in Exhibit B.

Exhibits

A – Agenda & Notes from Prior Year Planning Session

B – Budget/Financial Overview

C – Historic Reports/Data

Exhibit A – Agenda & Notes from Prior Year Planning Session

ANNUAL MEETING

Date, Time & Location : January 23, 2014, 10:30 a.m., 200 W. County Home Rd – LMP office
Community Liaisons : Kevin Brotz, Leza Harrison, David Kuketz, and Patty Searcy
Liaisons Present : Kevin Brotz, Leza Harrison (by phone), David Kuketz, and Patty Searcy
Seminole County : Thomas Calhoun, Kathy Moore, Kim Ornberg, and Carol Watral
Guests : Mark Besette and Frank Calzaretta

Topics carried forward from prior fiscal year activity

- Scheduled aquatic plant control treatments are bi-monthly (6 per year) or as authorized by County staff.
- As was confirmed by Seminole County in May 2013 email, the 8th Street canal will be treated as required at each scheduled lake treatment by the contractor.
- Prior to the July 13, 2013 Shoreline Restoration event, Seminole County biologist-consultant Dean Barber was available for on-site one-on-one consultations with properties designated as planting sites.
- Given forecasts for inclement weather, the July 13, 2013 Shoreline Restoration event was cancelled. Free native plants were still delivered on July 12, 2013 and 900 plants were planted by residents. Seminole County staff provided hands-on demonstrations to lake volunteers about how/where to plant the various species.
- Planting event to be held in August 2014 has been discussed. Liaisons requested a date earlier in the year if possible and Lake Management Program (LMP) will place request on waiting list should earlier date than August 2014 open. Kick-off location information is still pending from Liaisons.
- Water quality data for Horseshoe Lake North is now available on the Seminole County Water Atlas web site (www.seminole.wateratlas.org).
- Teleconference was held September 27, 2013 with liaisons and Seminole County staff to reach consensus regarding recommended September 2013 treatment for hyacinth and other aquatic invasive plants.
- Importance of maintaining level of service to control invasives has been conveyed to the Liaisons accompanied with a biological fact sheet on water hyacinth as well as liaison roles and responsibilities and essential services related to aquatic weed control (refer to *Summary September 27, 2013 Horseshoe Lake North teleconference* document).
- Property owners should be encouraged to communicate comments/concerns through the liaison group, who will provide consolidated request/comments to the MSBU Project Manager (Carol Watral).

General Topics & Updates

- Roles and responsibilities
- LAKEWATCH sampling
- Potential planting events
- New pricing available via state contract established with herbicide service provider
- Plans for current fiscal year
- Projections for next fiscal year
- General recommendations for community consideration

Meeting Notes:

- The importance of LAKEWATCH sampling, including need for consistency in obtaining samples (monthly recommended) was emphasized. Securing a back-up volunteer from the lake-community was suggested as a means for ensuring monthly samples are obtained.
- Liaisons expressed expectations and preference to attending Seminole County (County) bioassessment inspections; County advised that such inspections routinely did not accommodate citizen ride along, or ensuring scheduling of such visits per confirmation with lake liaisons. County confirmed that notice of inspection plans would be provided, and that the notice would provide offer of ride along when such could be accommodated by the County.
- Treatment access will continue via the Bessette property, with the Searcy property continuing as an alternative access site. It was noted by County that the Bessette property provides better access provisions than the Searcy property, but that having multiple access locations is now a routine protocol for such services. County will provide notice of planned access in advance when feasible. There was a brief discussion regarding existence of lake access via County easement at the end of 6th Street, however, this area does not offer the required access conditions.
- Liaisons questioned how to interpret the planned number and frequency of treatments, i.e., six treatments per year vs. bi-monthly treatments. County explained that the bi-monthly schedule (or six treatments) represents the basic expectation of treatment needs for the lake, however, the frequency and quantity of actual treatments may vary according to actual site conditions and treatment requirements deemed essential by County.
- A discussion regarding the timing of harvesting activity vs. County site evaluation confirmed the mutual agreement that such harvesting is valued. As the County is accountable for providing lake evaluations and determining treatment requirements, such activities/decisions will not be delayed based solely on whether or not harvesting activities have been conducted or communicated. Typically, the County will conduct site evaluation within the 2nd week of the month pending weather and schedule demands and routine treatments are conducted within the 3rd week of the month pending weather.
- The plant management permit (originally issued to Mark Bessette) will expire this year. The new/replacement permit will be issued to the County as is customary for MSBU-funded lakes in Seminole County.
- Liaisons suggested that a map with GPS points of areas with planted natives with “no-treat” designations would be helpful; County noted that a map with planted vegetation location will be developed and provided creating “no-treat” zones for existing and future planted vegetation locations. The County’s recommendation for manually removing invasive species from the vicinity of native plant areas was highlighted. Owners placing *do not spray* signage are responsible for removing invasive plants.
- The August 2014 planting event was discussed. Thomas Calhoun and Patty Searcy will coordinate together on logistics. Liaisons reminded County of their request for a spring planting event in 2015. County is still in need of a kick-off location.
- Liaisons were encouraged to promote private and individual planting events; as such activities can supplement the communitywide events sponsored by the County. Consultation regarding plant selection and known purchase locations is available from the County; however, the County may only provide aquatic plants for County-sponsored events.

Exhibit B - Budget/Financial Overview

MSBU:

Horseshoe Lake (Aquatic Weed Control)

Date:

January 29, 2015

Tax Year	2012	2013	2014	2015
Assessment	\$165.00	\$165.00	\$165.00	\$165.00
Fiscal Year	FY1213	FY1314	FY1415	FY1516
REVENUE	Actual	Actual	Working Budget	Projected Budget
Beginning Fund Balance	\$ -	\$ 2,124	\$ 7,268	\$ 12,113
Assessments	\$ 7,411	\$ 7,941	\$ 7,920	\$ 7,920
Other	\$ 13	\$ 15	\$ -	
MSBU Program Fund Advance	\$ -	\$ -	\$ -	
TOTAL	\$ 7,424	\$ 10,080	\$ 15,188	\$ 20,033
Cost Sharing				
TOTAL	\$ 7,424	\$ 10,080	\$ 15,188	\$ 20,033
Lake Management Program				
TOTAL	\$ 7,424	\$ 10,080	\$ 15,188	\$ 20,033
EXPENDITURE	Actual	Actual	Working Budget	Projected Budget
County Administrative Fee	\$ 1,200	\$ 1,075	\$ 1,075	\$ 1,075
Fund Advance Repayment	\$ 1,600	\$ 800	\$ -	\$ -
Contracted Services	\$ 2,500	\$ 937	\$ 2,000	\$ 2,000
<i>Routine Services</i>	\$ 2,500	\$ 937	\$ 1,200	\$ 1,200
<i>Hydrilla</i>	\$ -	\$ -	\$ 800	\$ 800
Contingency Reserve	\$ 2,124	\$ 7,268	\$ 12,113	\$ 16,958
TOTAL	\$ 7,424	\$ 10,080	\$ 15,188	\$ 20,033
Cost Sharing	\$ -	\$ -	\$ -	\$ -
TOTAL	\$ 7,424	\$ 10,080	\$ 15,188	\$ 20,033
Lake Management Program	\$ -	\$ -	\$ -	\$ -
TOTAL	\$ 7,424	\$ 10,080	\$ 15,188	\$ 20,033
Fund Advance BB	\$ 2,275	\$ 765	\$ -	\$ -
Payment	\$ 1,510	\$ 765	\$ -	\$ -
Fund Advance EB	\$ 765	\$ -	\$ -	\$ -

Exhibit C - Historic Reports/Data

Additional information for Horseshoe Lake North can be found on the Seminole County Water Atlas website at:

<http://www.seminole.wateratlas.usf.edu/resourceprogram.aspx?aid=15&wbodyid=7576>

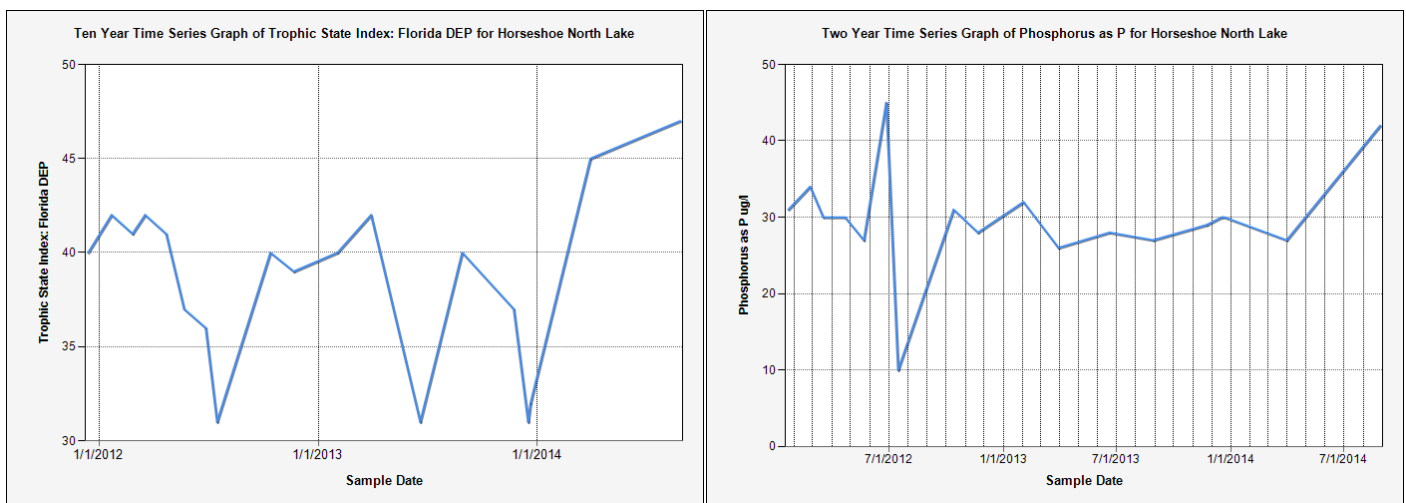
<http://www.seminole.wateratlas.usf.edu/lake/waterquality.asp?wbodyid=7576&wbodyatlas=lake>

Horseshoe Lake North 2014 Water Quality Report: How Does My Lake Rank?

TSI SCORE: 47 GOOD

The Trophic State Index (TSI) is a classification system designed to "rate" individual lakes, ponds and reservoirs based on the amount of biological productivity occurring in the water. Using the index, one can gain a quick idea about how productive a lake is by its assigned TSI number. A "Good" quality lake is one that meets all lake use criteria (swimmable, fishable, and supports healthy habitat).

The two graphs below indicates nutrient levels (measured by TSI and Total Phosphorous [TP]) for your lake. A TSI score of 60 or above is considered impaired (or polluted) lake. Continued reduction of TP sources (personal pollution, run-off, landscaping practices, shoreline erosion) can help reduce phosphorous in your lake that is abundantly available, potentially creating algae blooms.



Lake Vegetation Index Bioassessment (LVI): How Does My Lake Rank?

49 Healthy

The Lake Vegetation Index is a rapid bioassessment tool created by the Florida Department of Environmental Protection (FDEP) to assess the biological condition of aquatic plant communities in Florida lakes. The most recent LVI bioassessment for Horseshoe Lake North (sampled on September 2, 2014) scored a **49** which is in the **Healthy** category.

Aquatic life use category	LVI Range	Description
Category 1 "exceptional"	78–100	Nearly every macrophyte present is a species native to Florida, invasive taxa typically not found. About 30% of taxa present are identified as sensitive to disturbance and most taxa have C of C values >5.
Category 2 "healthy"	43–77	About 85% of macrophyte taxa are native to Florida; invasive taxa present. Sensitive taxa have declined to about 15% and C of C values average about 5.
Category 3 "impaired"	0–42	About 70% of macrophyte taxa are native to Florida. Invasive taxa may represent up to 1/3 of total taxa. Less than 10% of the taxa are sensitive and C of C values of most taxa are <4.